WHAT IS CLAIMED IS:

1.   A digital signal recording medium having a first area storing an audio title set, the audio title set having data representing audio information and data representing a still picture, the audio title set being void of a pack of data for playback control, the first area also storing information for managing the audio title set, the digital signal recording medium being void of a second area storing a video title set and information for managing the video title set.

2.   A digital signal recording medium as recited in claim 1, wherein the data representing the audio information in the audio title set results from analog-to-digital conversion of an analog audio signal at a predetermined sampling frequency.

3.   A digital signal recording medium as recited in claim 1, wherein the data representing the audio information in the audio title set includes first sub data and second sub data, the first sub data having a frame rate of 1/600 second and resulting from analog-to-digital conversion of an analog audio signal at a sampling frequency equal to a multiple of 48 kHz, the second sub data having a frame rate of 1/551.25 second and resulting from analog-to-digital conversion of an analog audio signal at a sampling frequency equal to a multiple of 44.1 kHz.

4.   A signal encoding apparatus comprising:

means for generating first information of management of an audio title set in response to first data representing audio information and second data representing a still picture; and

5   means for combining and formatting the first data, the second data, and the first information into a data structure;

wherein the data structure has a first area containing an audio title set, the audio title set having the first data and the second data, the audio title set being void of a pack of data for playback control, the first area also containing the first information, the data structure

10   being void of a second area containing a video title set and second information of management of the video title set.

5.   A signal encoding apparatus comprising:

means for generating first information of management of an

15   audio title set in response to first data representing audio information and second data representing a still picture; and

means for combining and formatting the first data, the second data, and the first information into a data structure;

wherein the data structure has a first area containing an audio

20   title set, the audio title set having the first data and the second data, the audio title set being void of a pack of data for playback control, the first area also containing the first information, the data structure being void of a second area containing a video title set and second information of management of the video title set; and

25   wherein the first data results from analog-to-digital conversion of an analog audio signal at a predetermined sampling frequency.

6. A signal encoding apparatus comprising:

means for generating first information of management of an audio title set in response to first data representing audio

5   information and second data representing a still picture; and

means for combining and formatting the first data, the second data, and the first information into a data structure;

wherein the data structure has a first area containing an audio title set, the audio title set having the first data and the second data,

10   the audio title set being void of a pack of data for playback control, the first area also containing the first information, the data structure being void of a second area containing a video title set and second information of management of the video title set; and

wherein the first data includes first sub data and second sub

15   data, the first sub data having a frame rate of 1/600 second and resulting from analog-to-digital conversion of an analog audio signal at a sampling frequency equal to a multiple of 48 kHz, the second sub data having a frame rate of 1/551.25 second and resulting from analog-to-digital conversion of an analog audio signal at a sampling

20   frequency equal to a multiple of 44.1 kHz.

7. A signal encoding apparatus comprising:

means for generating first information of management of an audio title set in response to first data representing audio

25   information and second data representing a still picture;

means for combining and formatting the first data, the second

data, and the first information into a data structure;

wherein the data structure has a first area containing an audio title set, the audio title set having the first data and the second data, the audio title set being void of a pack of data for playback control,

5   the first area also containing the first information, the data structure being void of a second area containing a video title set and second information of management of the video title set;

wherein the first data includes first sub data and second sub data, the first sub data having a frame rate of 1/600 second and

10   resulting from analog-to-digital conversion of an analog audio signal at a sampling frequency equal to a multiple of 48 kHz, the second sub data having a frame rate of 1/551.25 second and resulting from analog-to-digital conversion of an analog audio signal at a sampling frequency equal to a multiple of 44.1 kHz; and

15   means for placing second information in the first area, the second information representing that emphasis reproduction is inhibited when the sampling frequency related to the first sub data is equal to 192 kHz, and when the sampling frequency related to the second sub data is equal to 176.4 kHz.

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8.   A player for a digital signal recording medium having a first area storing an audio title set, the audio title set having data representing audio information and data representing a still picture, the audio title set being void of a pack of data for playback control,

25   the first area also storing information for managing the audio title set, the digital signal recording medium being void of a second area

storing a video title set and information for managing the video title
set, the player comprising:

means for detecting the managing information from the first
area of the digital signal recording medium; and

5   means for reproducing the data representing the audio
information and the data representing the still picture from the
digital signal recording medium in response to the detected
managing information.

10   9.   A player for a digital signal recording medium having a first
area storing an audio title set, the audio title set having data
representing audio information and data representing a still picture,
the audio title set being void of a pack of data for playback control,
the first area also storing information for managing the audio title

15 set, the digital signal recording medium being void of a second area
storing a video title set and information for managing the video title
set, wherein the data representing the audio information in the
audio title set includes first sub data and second sub data, the first
sub data having a frame rate of 1/600 second and resulting from

20 analog-to-digital conversion of an analog audio signal at a sampling
frequency equal to a multiple of 48 kHz, the second sub data having
a frame rate of 1/551.25 second and resulting from analog-to-digital
conversion of an analog audio signal at a sampling frequency equal to
a multiple of 44.1 kHz, the player comprising:

25   means for reproducing the first sub data and the second sub
data from the digital signal recording medium;

means for implementing digital-to-analog conversion of the reproduced first sub data to recover a corresponding analog audio signal; and

means for implementing digital-to-analog conversion of the

5 reproduced second sub data to recover a corresponding analog audio signal.

10. A player as recited in claim 9, further comprising means for indicating the sampling frequencies related to the first sub data and

10 the second sub data.

11. A digital signal recording medium having:

a first area storing audio title sets having data representing audio information and data representing a still-picture;

15 a second area storing menu information;

a third area storing information for managing the audio title sets;

a fourth area storing information for managing the audio title sets and the menu information; and

20 a fifth area storing TOC information.

12. A signal encoding apparatus comprising:

means for generating first information of management of an audio title set in response to first data representing audio

25 information and second data representing a still picture;

means for generating second information of management of

the audio title set and menu information in response to the first

data, the second data, and the menu information; and

　　　means for combining and formatting the first data, the second

data, the first information, the second information, and TOC

5　information into a data structure;

　　　wherein the data structure has a first area containing audio

title sets having the first data and the second data, a second area

containing the menu information, a third area containing the first

information, a fourth area containing the second information, and a

10　fifth area containing the TOC information.

　　13.　A player comprising:

　　　means for dividing an input signal into packs;

　　　means for separating the packs into first packs, second packs,

15　and third packs, the first packs including audio data, the second

packs containing real-time information data, the third packs still-

picture data;

　　　means for decoding the first packs into the audio data;

　　　means for decoding the second packs into the real-time

20　information data; and

　　　means for decoding the third packs into the still-picture data.

　　14.　A player as recited in claim 13, further comprising means for

outputting the audio data while outputting the still-picture data.

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　　15.　A player as recited in claim 14, further comprising means for

synchronizing the outputting of the audio data and the outputting of the still-picture data.

16.   A player as recited in claim 14, further comprising means for changing a page of a picture represented by the still-picture data in response to a page change command.

17.   A player for a digital signal recording medium storing first audio data, second audio data, and sampling frequency information, the first audio data having a first predetermined sampling frequency, the second audio data having a second predetermined sampling frequency, the sampling frequency information representing the first predetermined frequency of the first audio data and the second sampling frequency of the second audio data, the player comprising:

means for reproducing the first audio data and the sampling frequency information from the digital signal recording medium;

means for detecting a sampling frequency of the reproduced first audio data in response to the reproduced sampling frequency information;

means for converting the reproduced first audio data into third audio data having a sampling frequency equal to the second predetermined sampling frequency; and

means for implementing digital-to-analog conversion of the third audio data in response to a sampling clock signal having a frequency equal to the second predetermined sampling frequency.

18. A player as recited in claim 17, wherein the first audio data and the second audio data correspond to respective channels of a multiple-channel audio signal.

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19. A player as recited in claim 17, further comprising means for indicating the sampling frequency of the first audio data when the first audio data is reproduced.

10 20. A player for a digital signal recording medium storing audio data, copyright data related to the audio data, and still-picture data, the player comprising:

means for reproducing the audio data, the copyright data, and the still-picture data from the digital signal recording medium;

15 means for combining the reproduced copyright data and the reproduced still-picture data into a composite picture signal; and

means for outputting the reproduced audio data while outputting the composite picture data.

20 21. A player as recited in claim 13, further comprising means for reproducing information from a digital signal recording medium, and means for using the reproduced information as the input signal.

22. A player as recited in claim 13, further comprising means for
25 receiving the input signal from a transmission line.

23.   A signal encoding apparatus comprising:

means for generating audio packs containing audio data;

means for generating management packs containing information of management of the audio packs; and

5   means for placing character information and display time control data in the management packs, the character information relating to the audio data, the display time control data relating to a display time of the character information.

10   24.   A digital signal recording medium having:

first areas storing audio packs containing audio data; and

second areas storing management packs containing information of management of the audio packs, the management packs also containing character information and display time

15   control data, the character information relating to the audio data, the display time control data relating to a display time of the character information.

25.   A player for a digital signal recording medium having first

20   areas storing audio packs containing audio data, and second areas storing management packs containing information of management of the audio packs, the management packs also containing character information and display time control data, the character information relating to the audio data, the display time control data relating to a display time of the character information, the player comprising:

25   means for reproducing the management packs from the

digital signal recording medium;

means for decoding the reproduced management packs into the character information;

means for decoding the reproduced management packs into

5   the display time control data; and

means for indicating the character information in response to the display time control data.

26.   A signal encoding apparatus comprising:

10   means for generating audio packs containing audio data;

means for generating character display packs containing character information and display time control data, the character information relating to the audio data, the display time control data relating to a display time of the character information; and

15   means for generating management data containing information of management of the audio packs and the character display packs.

27.   A digital signal recording medium having:

20   first areas storing audio packs containing audio data;

second areas storing character display packs containing character information and display time control data, the character information relating to the audio data, the display time control data relating to a display time of the character information; and

25   third areas storing management data containing information of management of the audio packs and the character display packs.

28.   A player for a digital signal recording medium having first
areas storing audio packs containing audio data, second areas
storing character display packs containing character information

5   and display time control data, the character information relating to
the audio data, the display time control data relating to a display
time of the character information, and third areas storing
management data containing information of management of the
audio packs and the character display packs, the player comprising:

10   means for reproducing the character display packs from the
digital signal recording medium;

means for decoding the reproduced character display packs
into the character information;

means for decoding the reproduced character display packs

15   into the display time control data; and

means for indicating the character information in response to
the display time control data.

29.   A signal encoding apparatus comprising:

20   means for generating audio packs containing audio data;

means for generating character display packs containing
character information relating to the audio data; and

means for generating management data containing
information of management of the audio packs and display time

25   control data relating to a display time of the character information.

30. A digital signal recording medium having:

first areas storing audio packs containing audio data;

second areas storing character display packs containing character information relating to the audio data; and

5   third areas storing management data containing information of management of the audio packs and display time control data relating to a display time of the character information.

31. A player for a digital signal recording medium having first

10   areas storing audio packs containing audio data, second areas storing character display packs containing character information relating to the audio data, and third areas storing management data containing information of management of the audio packs and display time control data relating to a display time of the character

15   information, the player comprising:

means for reproducing the character display packs and the management packs from the digital signal recording medium;

means for decoding the reproduced character display packs into the character information;

20   means for decoding the management packs into the display time control data; and

means for indicating the character information in response to the display time control data.

25   32. A signal encoding apparatus as recited in claim 26, wherein the display time control data represents a display start time and a

display end time in terms of addresses of the audio packs.

33.   A digital signal recording medium as recited in claim 27,
wherein the display time control data represents a display start
5   time and a display end time in terms of addresses of the audio
packs.

34.   A player as recited in claim 28, wherein the display time
control data represents a display start time and a display end time
10   in terms of addresses of the audio packs.

35.   A digital signal recording medium having a first area storing
audio title sets comprising data representing audio information, data
representing still picture and data representing real-time text, the
15   audio title set being void of pack of data for playback control, the
first area also storing menu information and information for
managing the audio title sets and the menu information, the digital
signal recording medium being void of a second area storing a video
title set and information for managing the video title set.

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36.   A signal encoding apparatus for encoding a signal into a format
which corresponds to a digital signal recording medium having a
first area storing audio title sets comprising data representing audio
information, data representing still picture and data representing
25   real-time text, the audio title set being void of pack of data for
playback control, the first area also storing menu information and

information for managing the audio title sets and the menu information, the digital signal recording medium being void of a second area storing a video title set and information for managing the video title set.

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37. A signal encoding method for encoding a signal into a format which corresponds to a digital signal recording medium having a first area storing audio title sets comprising data representing audio information, data representing still picture and data representing

10 real-time text, the audio title set being void of pack of data for playback control, the first area also storing menu information and information for managing the audio title sets and the menu information, the digital signal recording medium being void of a second area storing a video title set and information for managing

15 the video title set.

38. A signal decoding apparatus for decoding a signal reproduced from a digital signal recording medium having a first area storing audio title sets comprising data representing audio information, data

20 representing still picture and data representing real-time text, the audio title set being void of pack of data for playback control, the first area also storing menu information and information for managing the audio title sets and the menu information, the digital signal recording medium being void of a second area storing a video

25 title set and information for managing the video title set.

39.   A signal decoding method for decoding a signal reproduced
from a digital signal recording medium having a first area storing
audio title sets comprising data representing audio information, data
representing still picture and data representing real-time text, the
5   audio title set being void of pack of data for playback control, the
first area also storing menu information and information for
managing the audio title sets and the menu information, the digital
signal recording medium being void of a second area storing a video
title set and information for managing the video title set.